DOCUMENT RESUME

ED 196 674 SE 033 230

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TITLE Making Maps. Elementary Science Study.
INSTITUTION Elementary Science Study, Newton, Mass.
SPONS AGENCY National Science Foundation, Washington, D.C.
REPORT NO ISBN-07-017719-8
PUB DATE 71
NOTE 25p.: For related documents, see SE 033 231 and SE 033 243. Contains photographs which may not reproduce well.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Cartography: Elementary Education: *Elementary School Science: *Interdisciplinary Approach: *Maps: *Map Skills: *Science Activities: Science Course Improvement Projects: *Science Curriculum: Science Education

ABSTRACT

An approach to mapping work in the elementary classroom is presented. Described is a sixth-grade class working with mapping activities for the first time over a three-week span. Activities described include mapping of a classroom, the importance of a key, and important map characteristics. (DS)

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making maps

Elementary Science Study

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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SE 033 230

THE MAPPING UNIT
Teacher's Guide for Mapping
Mapping Games
Making Maps
Class Kit for Mapping

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ISBN 07-017719-8

preface

The Elementary Science Study is one of many curriculum development programs in the fields of science, social studies, and mathematics under preparation at Education Development Center, Inc. EDC (a private nonprofit organization, incorporating the Institute for Educational Innovation and Educational Services Incorporated) began in 1958 to develop new ideas and methods for improving the content and process of education.

ESS has been supported primarily by grants from the National Science Foundation. Development of materials for teaching science from kindergarten through eighth grade started on a small scale in 1960. The work of the project has since involved more than a hundred educators in the conception and design of its units of study. Among the staff have been scientists, engineers, mathematicians, and teachers experienced in working with students of all ages from kindergarten through college.

Equipment, films, and printed materials are produced with the help of staff specialists, as well as of the film and photography studios, the design laboratory, and the production shops of EDC. At every stage of development, ideas and materials are taken into actual classrooms, where children help shape the form and content of each unit before it is released to schools everywhere.

acknowledgments

Making Maps records a series of mapping activities which took place in Bruce Whitmore's sixth grade in the Carr School in Newton, Massachusetts. I photographed the class over a three-week period. The photos were mounted and captioned by Beth Barth for a workshop display. Ann Mellor prepared this booklet from the display, and Nancy Weston designed the cover.

John Merrill

introduction

Making Maps illustrates one of several approaches to mapping work in the classroom. It is a companion to MAPPING.

The following pages show a sixth grade class working with mapping activities for the first time over a three-week span. The children met four times a week for 40-minute periods.

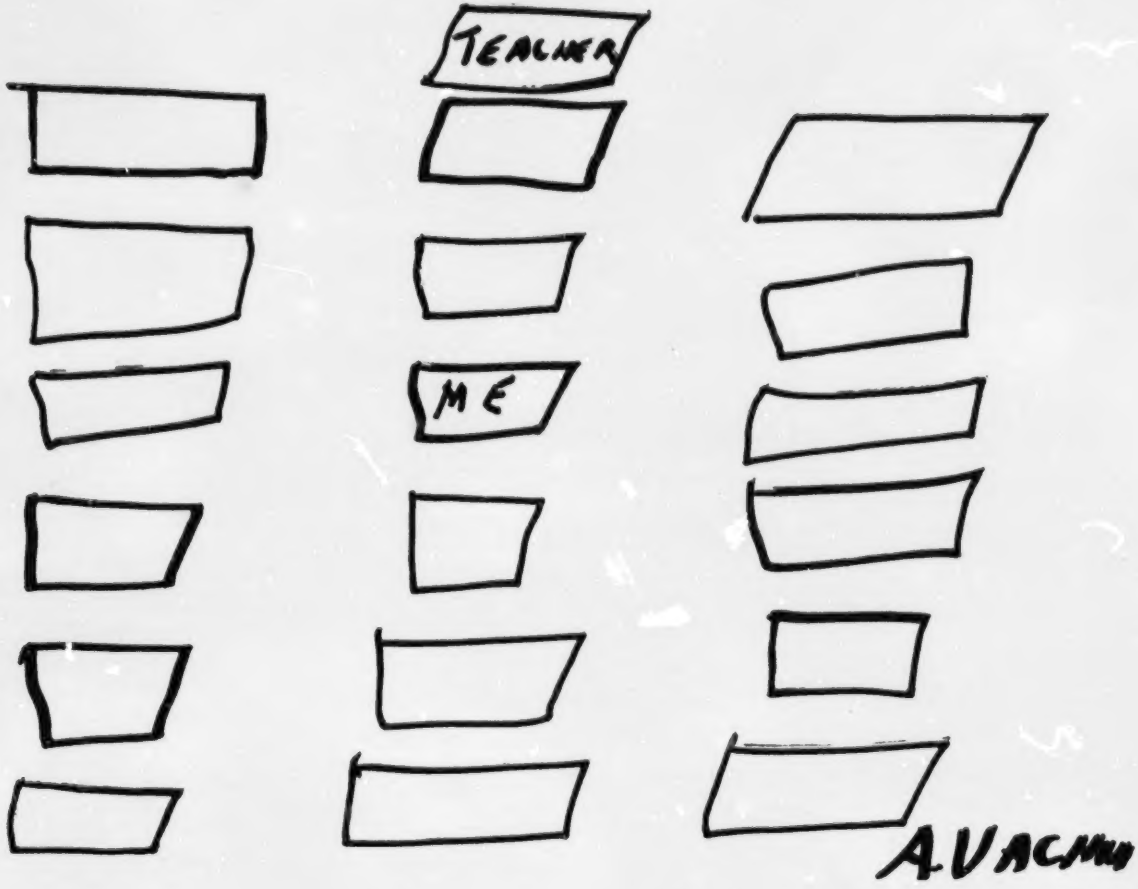
There was little formal introduction. The teacher handed out the materials for the first activity and asked, "Can you draw a map of the classroom?"

Children worked singly, in pairs, or in groups. The teacher moved around the room and watched the children at work. When he felt a student needed help, he asked him a question that he thought might help him look at his problem from a fresh perspective. When he felt that the students had gone as far as they could with a given problem, he proposed a new one and made additional materials available as they were needed.

can you draw a map of the classroom?

Materials

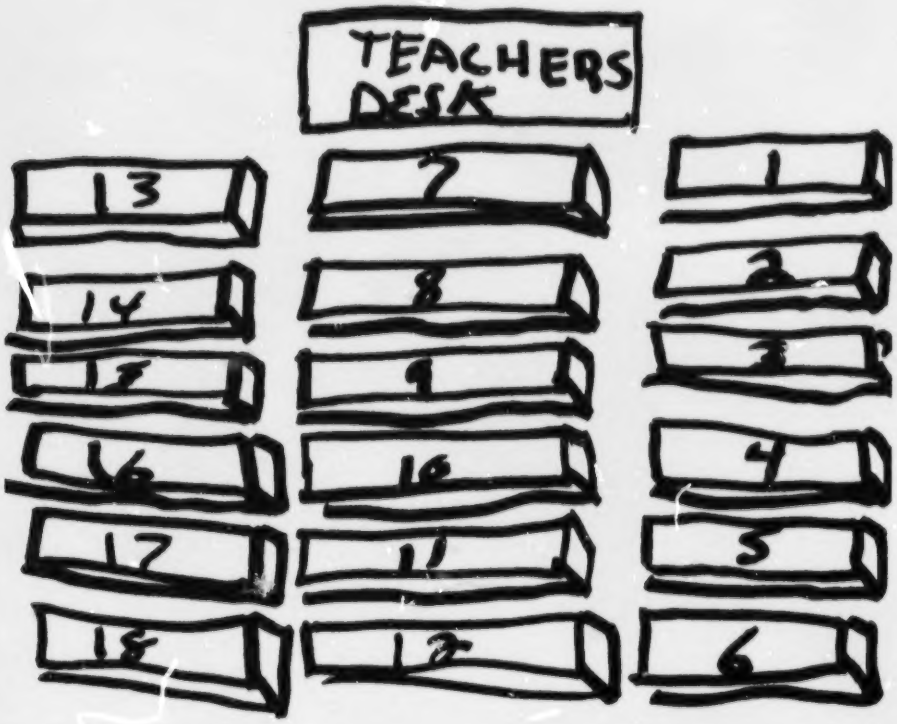
drawing materials
paper
rulers (if the children want them)



If no one told me what this was a map of, would I know from looking at your map?

Are all the desks the same size?

Where were you when you mapped the room—on the ceiling or at your desk?



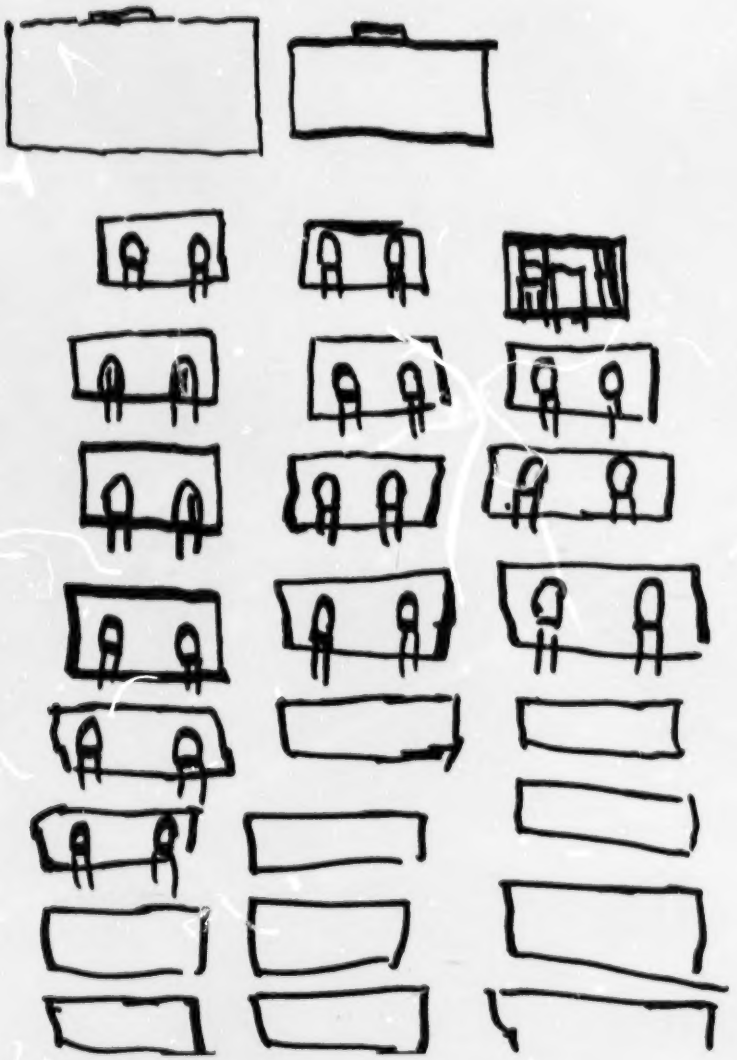
KEY

Row 1	Has 13	People	
Row 2	" 10	"	
Row 3	" 9	"	

Are those desks or boxes? How can I tell?

Did you plan how much room you'd need to fit the right number of desks into your map?

If we were in the room you drew, would we have space to do anything but sit at our desks?



Why is it helpful to have a map key?

how can four people copy this drawing?

Materials

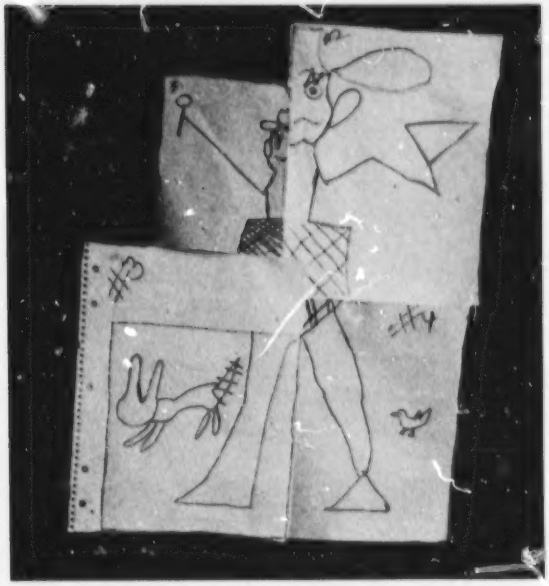
several sizes of paper
assorted drawing materials
cellophane tape

The teacher made this drawing on 18" x 24" paper and hung it in front of the class. He had the children number off in turn, so that each child was 1, 2, 3, or 4. Then he told the class that each child was to copy the quarter of the drawing with his number on it.

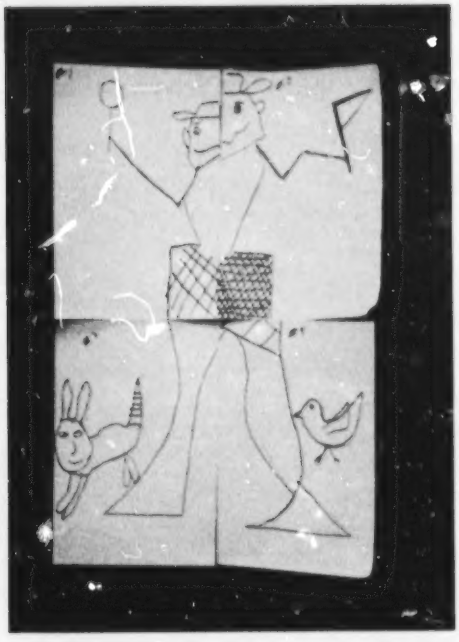
When they were finished, the teacher told the children to get together in groups of four, with one of each number.

"Now, fit your quarters together and see if you can make a whole picture."

Here are some of the results:

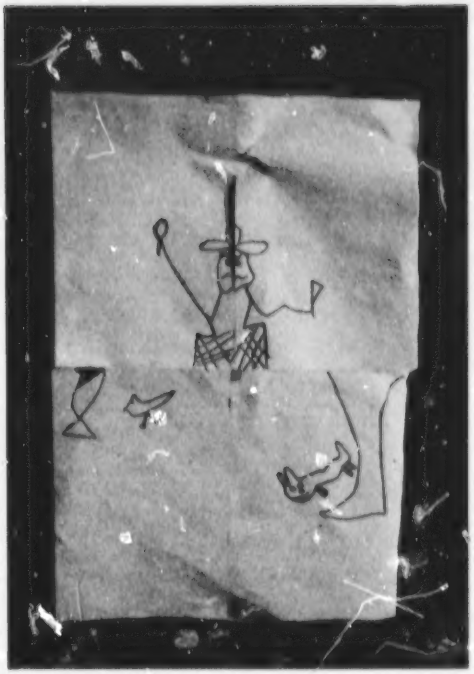


"We should all have used the same size paper."



"We should all have used a pencil."

"You have to decide where the lines meet."



"You have to decide how big you're going to draw."

can a small group make a map of the room?

Materials

drawing materials—pencils, crayons, etc.
paper
rulers
cellophane tape

What should the members of each group decide before they begin?

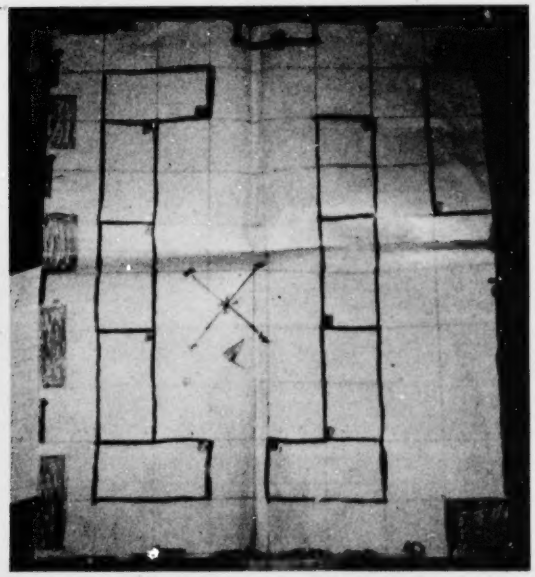
"How big things are going to be."

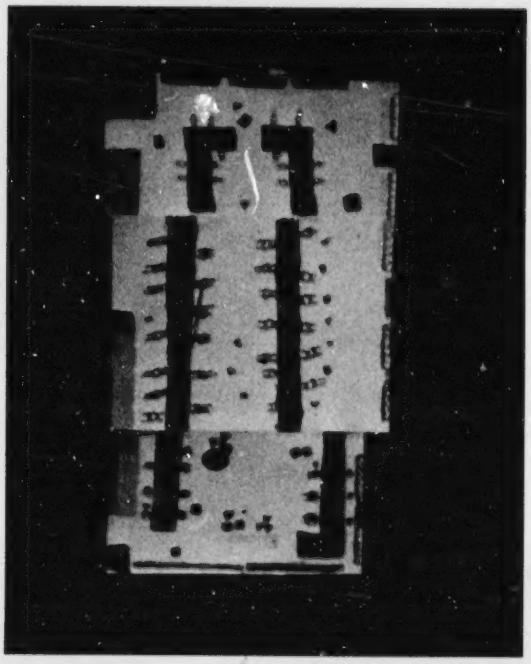
"You all have to look from the same place."

"Everyone draw with the same thing on the same size paper."

What did you find out?

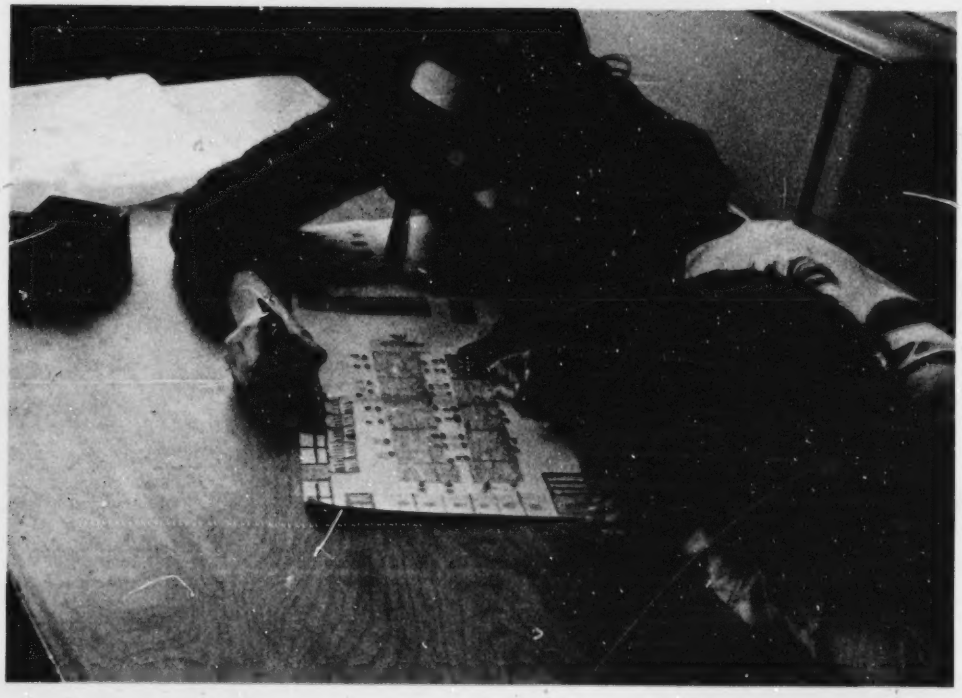
"If you use big graph paper, you can make the parts fit together exactly."



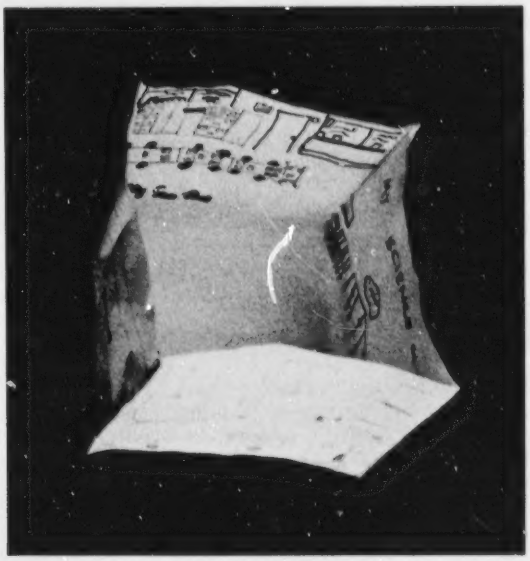


"We measured the size of things right, but we didn't figure out where they went."

"You don't have to fit pieces together if you draw on the same piece of paper."



"You can show the room better if you build it."



can you draw a map of your route from school to home?

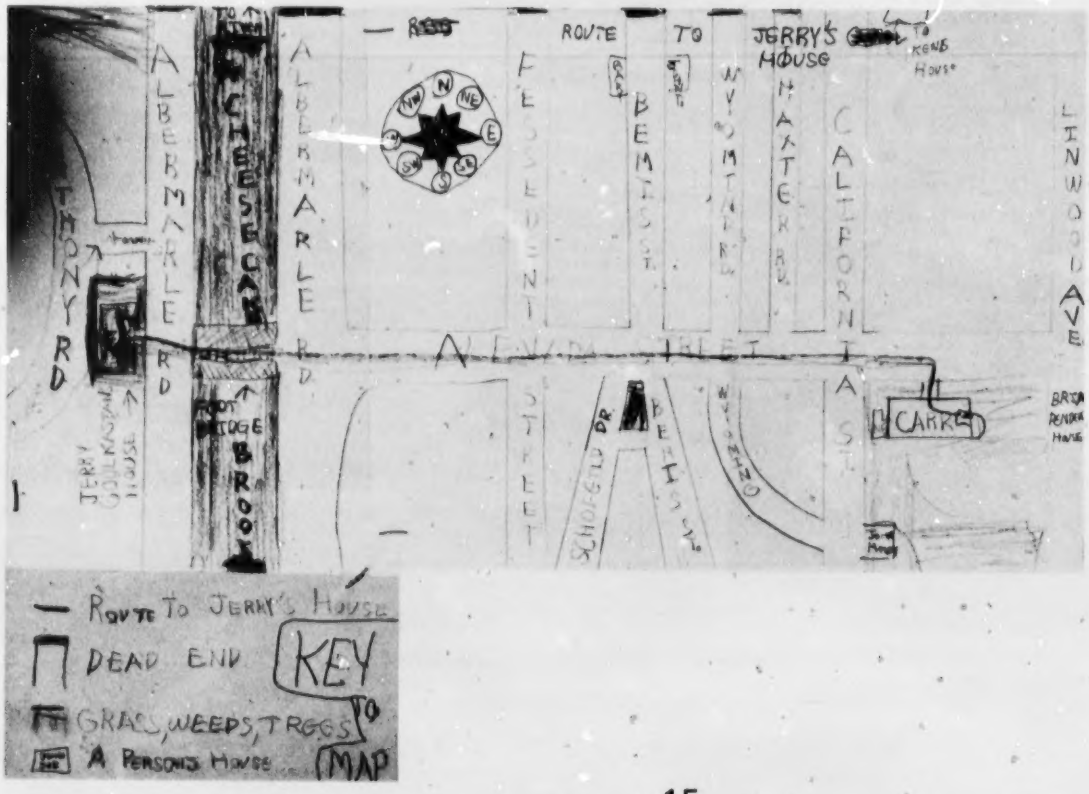
Materials

drawing materials
paper

What things are important to put on your map?

"A key."
"Street names."
"Symbols."
"A compass."
"Landmarks."

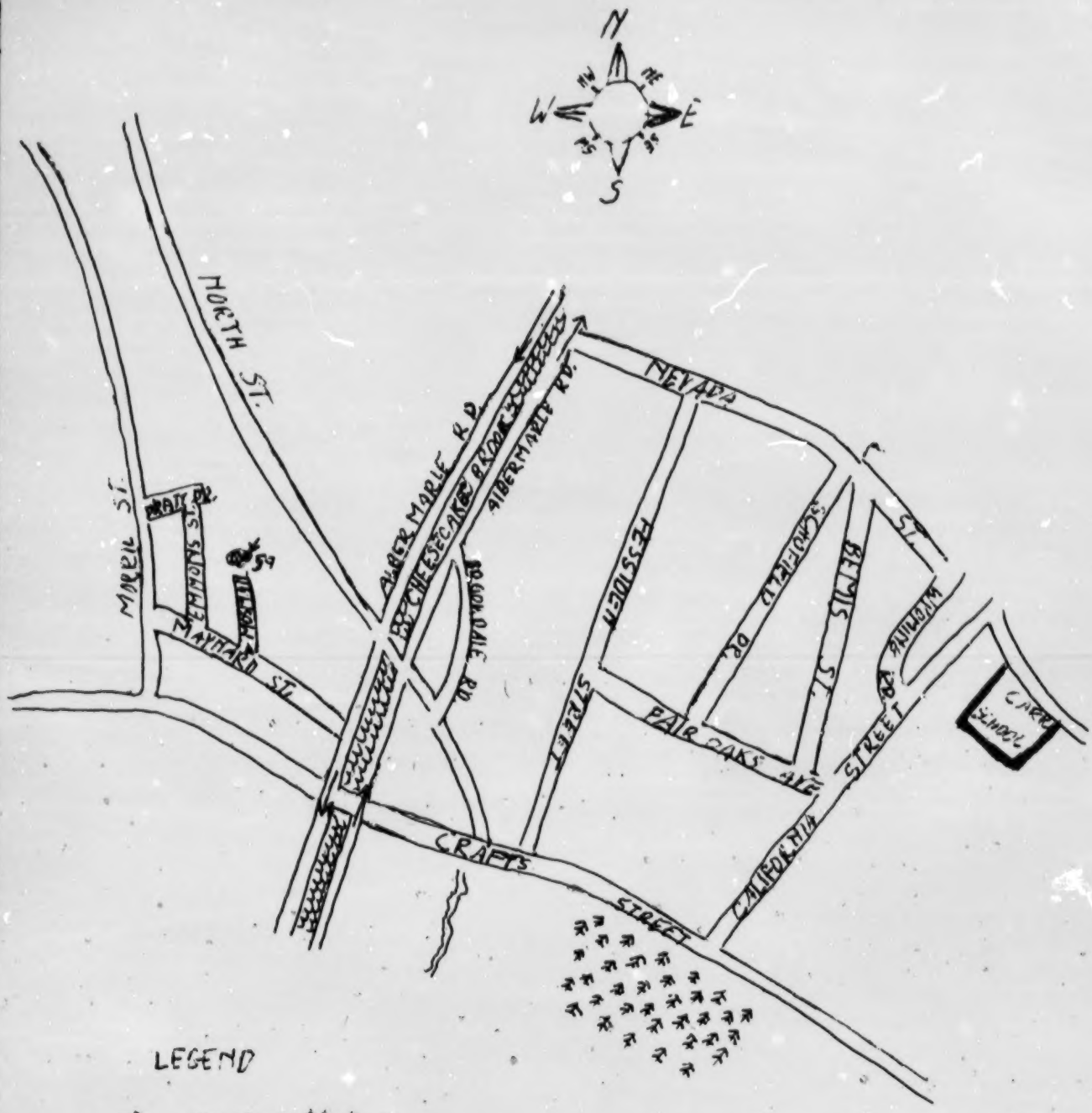
Should the important things look bigger than the other things?



Which way is up?

Map

by Connie Lupo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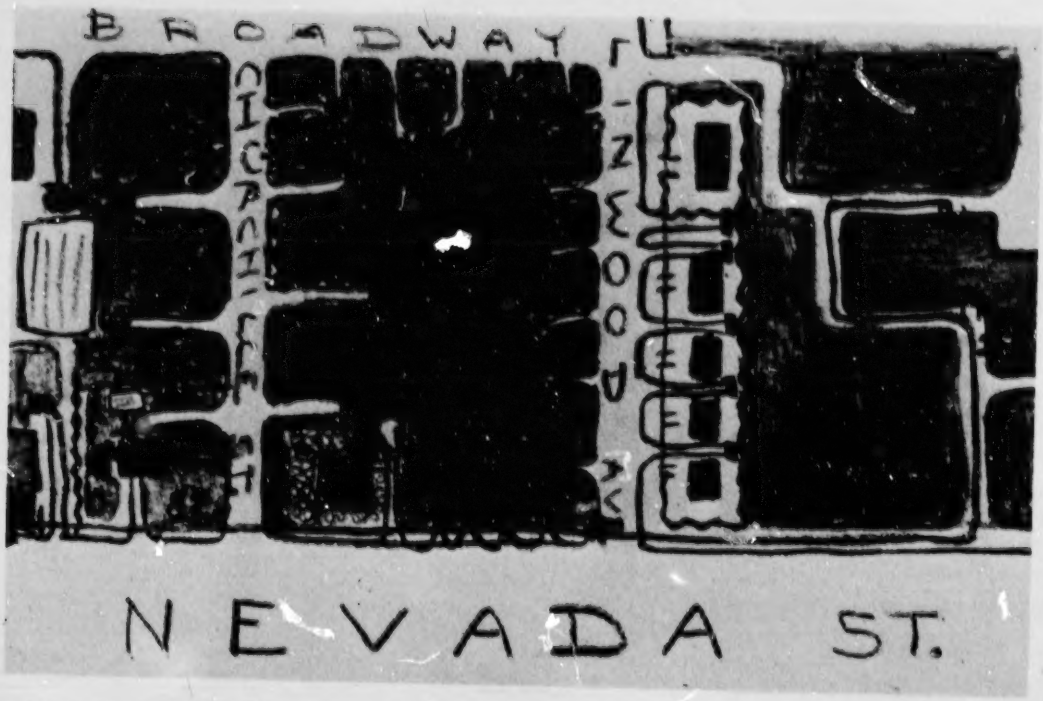
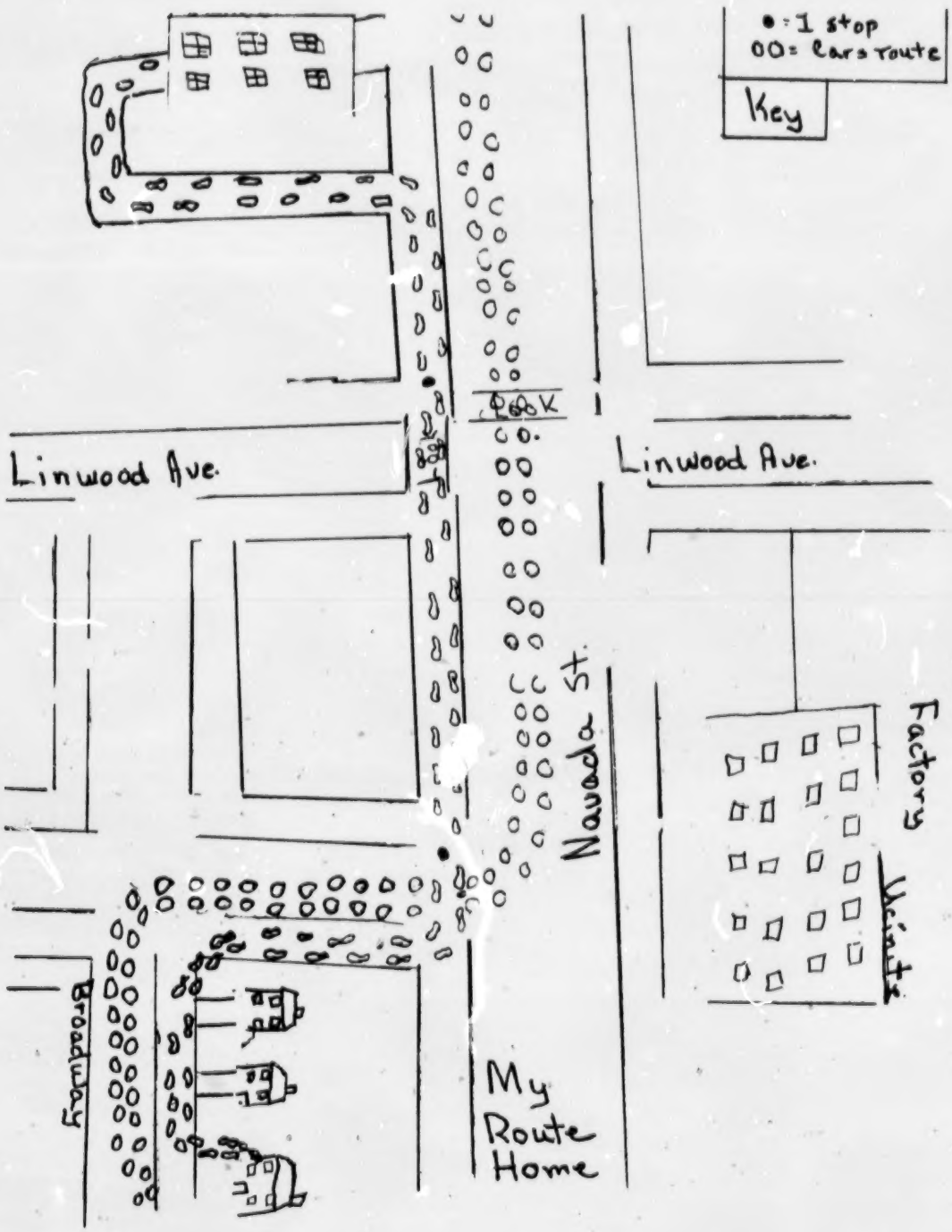
CHEESECAKE BROOK
ALBERMARLE RD.
BROOKDALE RD.
NEVADA
FESSDEN STREET
SCHOFIELD DR.
BERRIS ST.
WARNER ST.
PARK
SCHOOL
PAR OAKS AVE.
CRAFTS
STREET
CALIFORNIA
STREET
LEGEND
one way streets
Brook
Forest



- houses
- garages
- fences
- driveways
- streets
- bushes
- garden
- grass
- tree
- entrances
- the route I take home
- my house
- school

Debby G.

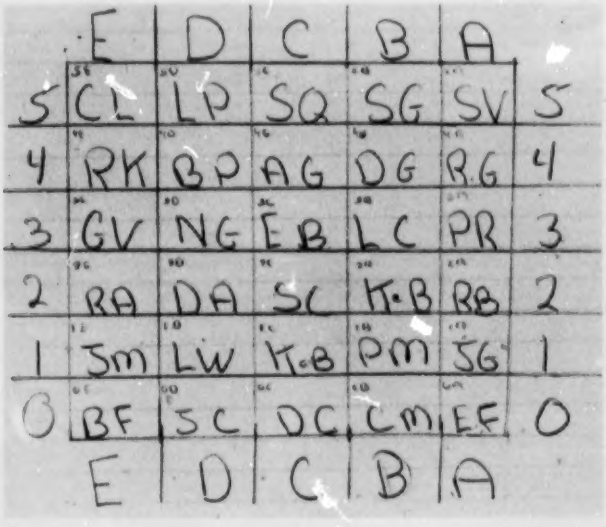

●: 1 stop
OO: Cars route
Key
Linwood Ave.
Linwood Ave.
Nevada St.
Factory
Broadway
My Route Home

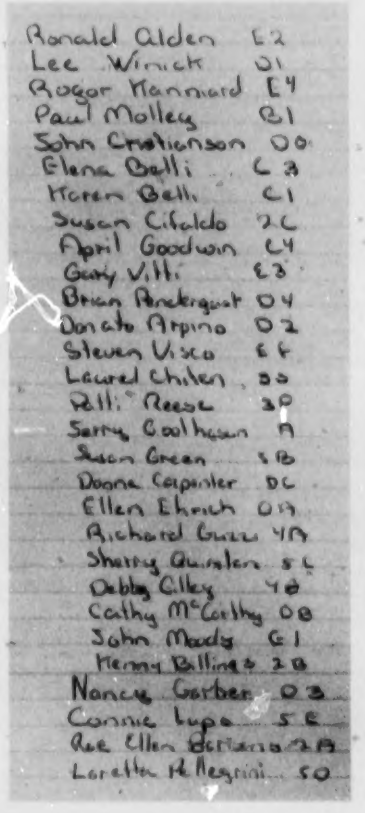
can the whole class make a map of the room?

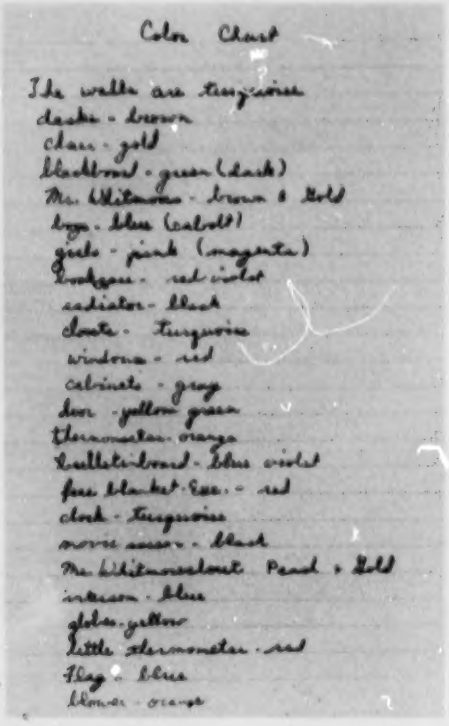
Materials

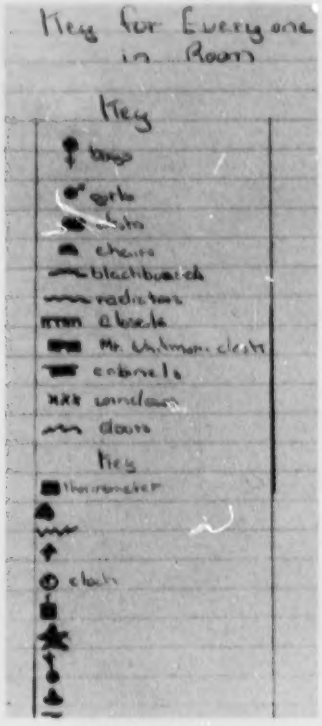
paper (all one size)
drawing materials—pencils, crayons, etc.
measuring tape or yardstick
cellophane tape

After some discussion about how to begin such a project, the class decided to divide the room into 30 parts—the number of children in the class. Each student was assigned to one section.



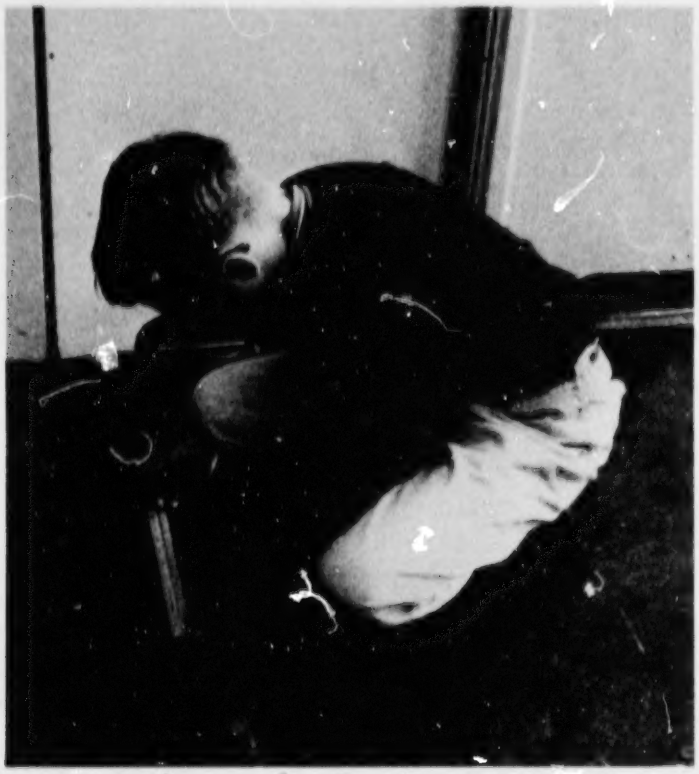




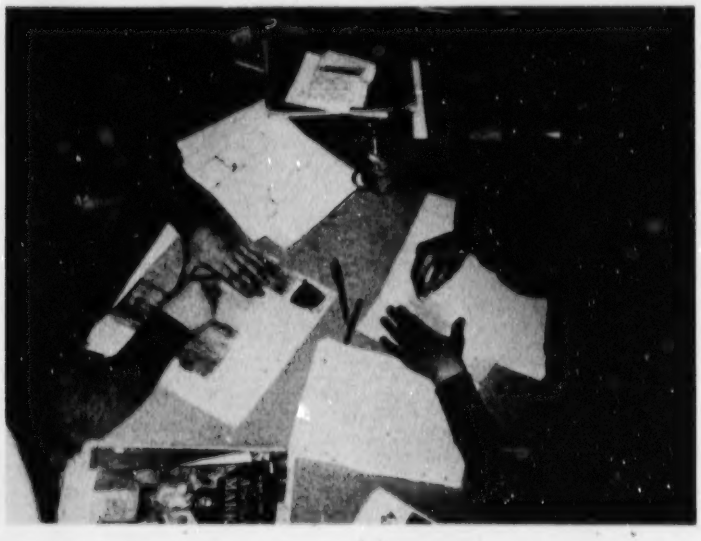


They made a key so all the symbols and colors would mean the same thing.

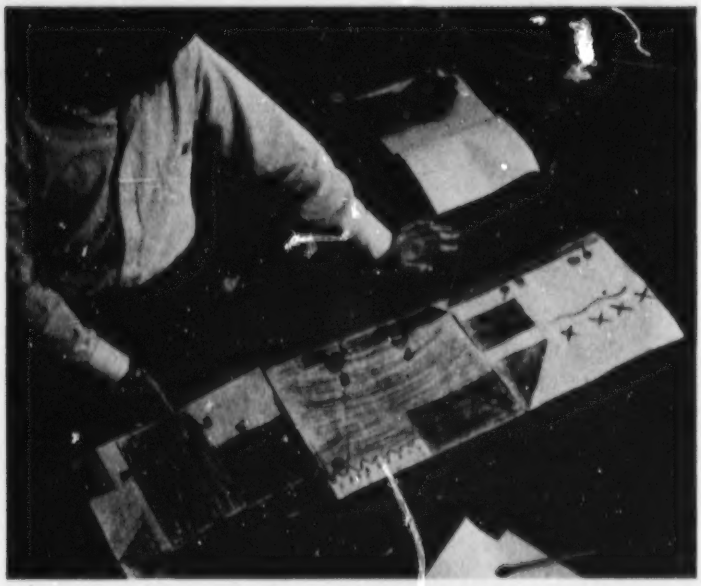
Then everyone set to measuring. The room was 20' x 25', so everyone's section was 4' x 5'. The scale chosen was about 2 inches to 1 foot (1:6).



"Everyone should draw like they were looking down."

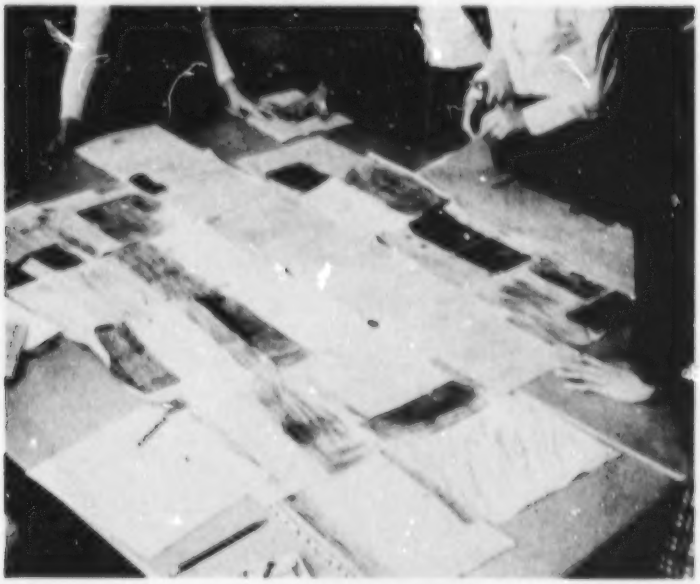


"You didn't look at the key."

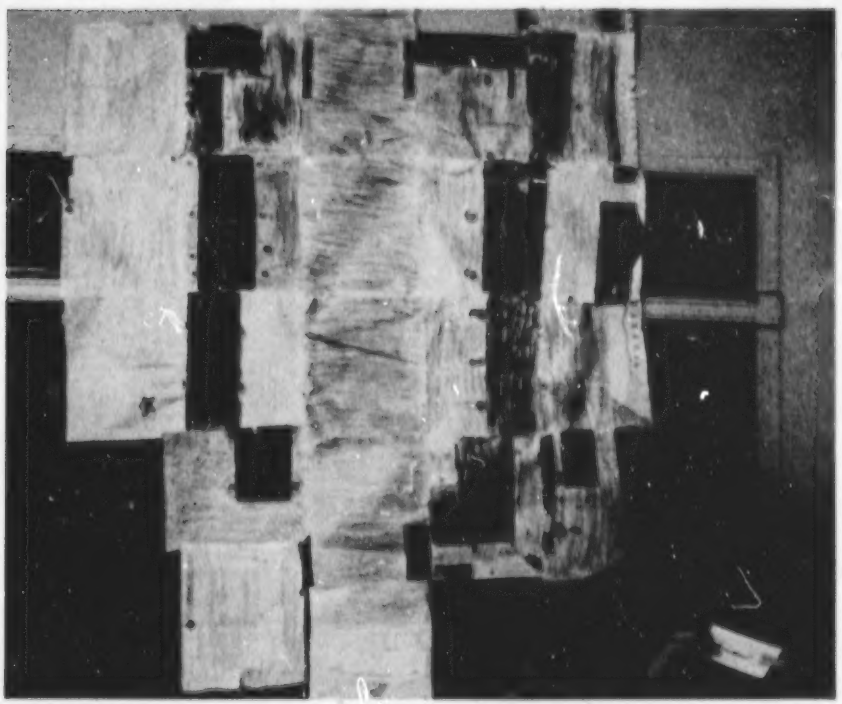


"You measured wrong."

"Which way is up?"



"Let's do it again."



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